January/February 2001

The Chronicle

Published for the employees of SPAWAR Systems Center, Charleston

Welcome to the 21st century and the 3rd millennium!

The Chronicle

**SPAWAR Systems Center,
Charleston
P.O. Box 190022
North Charleston, SC 29419-9022**

**Telephone: (843) 218-4021
DSN 588-4021**

Our Mission is to engineer, deliver, and support the best information technology system solutions, through dedicated customer focus, professional employee development, industry partnership, and continuous process and product improvement.

Our Vision for the future is to be the activity of choice by our customers, the innovator of new technologies and systems, an ambassador and business partner in the community, the leader in electronic engineering facilities, the provider of a safe and nurturing work place, and the premier organization for new business strategies.

**Commanding Officer,
Captain Nancy L. Deitch,
United States Navy**

Editor: Lynda Silvers

Photographer: Harold Senn

***The Chronicle* is a bimonthly publication designed for SPAWAR Systems Center, Charleston's employees. Its purpose is to inform, educate, entertain, and generate new ideas. An official publication, *The Chronicle* is printed on recyclable paper using appropriated funds in compliance with Navy Publications and Printing regulations. Contents of *The Chronicle* are not necessarily the official views of, or endorsed by, the U.S. Government, the Dept. of Defense, or the U.S. Navy.**

Submissions for publication in *The Chronicle* should be sent to the editor, Code 0A6LS, at the above address, or e-mail to silversl@spawar.navy.mil. The Chronicle reserves editorial privileges with all submissions.

***The Chronicle* can also be viewed from our web site: www-chas.spawar.navy.mil.**

Captain's Call

By Capt. Nancy L. Deitch, USN
Commanding Officer

On a trip to Norfolk last month, I had the opportunity to sit next to a brand new Seaman Apprentice during the flight from Charleston to Charlotte. I will tell you, there is nothing better for renewing your energy level than to sit next to the next generation of the Navy. The chance encounter was appropriate, as I had just had the opportunity to listen to Brig. Gen. Cheney, USMC, speak to the local Navy League about recruiting. This newest generation, post Gen-X, called the Millenials, brings a renewed sense of commitment and dedication to the work place. It was also opportunistic, as we at SSC Charleston have been working hand in hand with SPAWAR headquarters to look at structuring the workforce.

With that introduction, I thought it appropriate to start the first edition of the new millenium with some thoughts on where I would like to see us headed. My first goal for this upcoming year is to examine emerging technology, and identify those areas in which SSC Charleston wants to assume a leadership role. This is not meant to suggest in the slightest that we are moving away from our traditional engineering core competencies and customer base. Rather, we are looking to expand our horizons, keeping in mind to focus on those areas that fall within the boundaries of "inherently governmental." This is especially critical as we continue to work through our Commercial Activities studies and Functional Assessments.

The second goal is to structure our organization to help us best implement goal number one. This continues the theme of consolidation of duplicative infrastructure that I addressed in my first *Chronicle* article.

Coming up in the near future. SSC Charleston has volunteered to coordinate the annual Federal Employee of the Year awards program. As a commanding officer, the opportunity to recognize coworkers for their professional achievements is the best part of my day. Mark your calendar — the awards luncheon will be on May 3 at the Charleston Club on the Air Force Base.

Finally, I had the honor and privilege late last month of presenting the President's Council on Year 2000 Conversion Medal to **Phil Charles** and promoting **Lt. Chuck Payne** to Lt.Cmdr. Last week in Baltimore, Md., **Norris Mitchell** was recognized for a special achievement award at the 2001 Black Engineer of the Year Awards Conference. Also, last week at our St. Juliens Creek detachment, Cmdr. **Art Billingsley** relieved Cmdr. Robbie Knight as Officer in Charge of SPAWAR Systems Center Charleston, St. Juliens Creek Detachment. Please join me in congratulating them all on their outstanding contributions to the command and to the Navy.

Phil Charles earns — *Presidential Y2K Medal*

Philipp Charles, SSC Charleston's chief systems engineer (J0E), was presented the Presidential Year 2000 Medal by Capt. Deitch on Jan. 29. Phil managed the development of an innovative process and toolset to assess 230 systems' interoperability in end-to-end configurations prior to at-sea testing. This methodology focused on end-to-end capabilities, designated as essential by the commanders in chiefs, and assessed the results in terms of *Mission Area* impact. The effort identified 113 essential fleet capabilities that would have crippled the Battle Groups on Jan. 1, 2000, had they not been corrected. Instead of using conventional methods to test and assess every Battle Group, or overlooking deficiencies until after deployment, this innovative approach saved the Navy approximately $200 million. This effort was recognized by the Chief Naval Officer (CNO) as a key reason why no mission-critical failures occurred during the critical date transitions. Additionally, this approach was specifically recommended to the Joint Chiefs of Staff and acknowledged in the Navy's congressional report from CNO to Congress.

Norris Mitchell — *Most Promising Engineer*

On Feb 8, **Norris C. Mitchell** received the Most Promising Engineer Special Achievement Award at the Fifteenth Annual Black Engineer of the Year Awards Conference at the Renaissance Harborplace Hotel in Baltimore, Md.

Each year the award is given to candidates whose qualifications and performance place them in the ranks of the nation's highest achievers in technology. The conference historically attracts leaders in government, education and industry, as well as other professionals, and is sponsored by a consortium of educational and industrial organizations, including the Council of Engineering Deans of Historically Black Colleges and Universities, Lockheed Martin Corporation, Daimler Chrysler Corporation, and US Black Engineer and Information Technology and Information Magazine

Norris heads the Multimedia Systems Engineering Branch (J732) of the Intelligence and Information Warfare Systems Engineering Department. This branch provides video teleconferencing expertise to the DoD and other government agencies worldwide.

With 15 years of federal service to his credit, Norris has established a distinguished personnel file, working his way from engineering trainee, to engineer, to project engineer, and now supervisory engineer. With a BS degree in electrical engineering from the University of South Carolina, Norris is also active in his church and local schools as a role model for youth throughout the community.

Change of Charge ceremony observed at St. Juliens Creek

On Feb. 2, Commander Arthur B. Billingsley became the fourth officer-in-charge of SSC Charleston, Detachment St. Juliens Creek in Portsmouth, Va. He relieved Cmdr. Robby L. Knight who will be retiring in May after 23 years of dedicated service.

After assuming charge, Cmdr. Billingsley said, "I personally applaud the efforts of all who ensure our sailors are the best equipped, best trained and best prepared naval force in the world. You have well executed the public trust with which you have been entrusted.

"You are directly responsible for the readiness of our naval forces. Battle group after battle group, exercise after exercise, ship after ship, station after station, you all have continued to make more ready and more capable, our naval forces. Today, we seek the same, with our sister services and other government agencies.

"I am committed to assist and serve in building these new relationships and improving our current relationships. This is and will be a challenge for us all. We seek to become not just the Navy's premier C4I organization, but our government's premier source for C4I leadership and guidance.

"I accept the challenge set before us and I seek to serve you all, well. I am honored by your support, inspired by your dedication, and encouraged by your professionalism. I look forward to serving with you all."

Cmdr. Billingsley joined the Navy's enlisted Nuclear Power Program in 1978, was selected for officer training through the BOOST program, attended Auburn University under a NROTC scholarship, and graduated with a degree in computer engineering. He received an officer commission in 1985.

After completing Surface Warfare officer School in San Diego, Cmdr. Billingsley served aboard the *USS Mars* as the ship's communications officer, deploying twice to the Western Pacific/Indian Ocean and Gulf of Oman. In 1988, he served as officer recruiter at Navy Recruiting District in Chicago, Ill.

Cmdr. Billingsley (left) receives the sword from Cmdr. Knight which passes authority from one to the other.

In 1990, Cmdr. Billingsley was selected to attend the Naval Postgraduate School where he was a member of the Eta Kappa Nu Engineering Society and the president of the local IEEE chapter, published several articles on computer architecture, and was also selected for transfer into the Engineering Duty Officer program. He graduated from NPS with a master of science degree in electrical engineering.

In 1993, Cmdr. Billingsley transferred to SPAWAR headquarters in Crystal City, assigned to then PMW-156 where he served as project engineer and manager for various communications programs. In 1996, he was assigned to the CNO-N6 staff as assistant for EHF and advanced satellite communications systems.

Cmdr. Billingsley served in the Navy Personnel Command as the placement officer for NAVSEA and its claimancy in 1998 where he was responsible for the officer staffing of more than 300 commands including NAVSEA headquarters and all Navy shipyards. During that time, he was an adjunct professor for the University of Memphis and the State Technical College teaching courses in computer operating systems and electrical circuit analysis.

In the fall of 1999, Cmdr. Billingsley came to SSC Charleston at the St. Juliens Creek detachment. He is now the lead for the Logistics and Customer Support group (J0L) and the officer in charge at St. Juliens Creek. His personal awards include Meritorious Service Medal, Navy Commendation Medal with Gold Star and the Navy Achievement Medal.

Transfer of authority ceremony held in New Orleans

By Maria LoVasco Tolleson
SPAWAR ITC PAO

On Nov. 30, 2000, a ceremony held at the Space and Naval Warfare Information Technology Center (SPAWAR ITC), New Orleans, officially recognized the transfer of the SPAWAR ITC from the Naval Reserve Force Command, headquartered in New Orleans, La., to the Space and Naval Warfare Systems Command (SPAWARSYSCOM) in San Diego, Calif.

With the addition of the SPAWAR ITC as its newest Echelon 3 field activity, the New Orleans center joins the other SPAWAR Systems Centers in Charleston, S.C.; Chesapeake, Va., and China Lake and San Diego, Calif. The SPAWAR ITC brings to SPAWARSYSCOM the ability to provide cost-efficient technical solutions for human resources and other business systems.

In attendance at the ceremony to commemorate this transfer was Dr. H. Lee Buchanan III, Assistant Secretary of the Navy for Research, Development and Acquisition. In addition, three Louisiana Congressmen, William Jefferson, John Cooksey, and David Vitter also gave remarks recognizing the importance of the SPAWAR ITC to the Navy, the State of Louisiana and the City of New Orleans. More than 600 guests and employees filled a ceremonial tent to capacity.

During his remarks, Dale Galloway, SPAWAR ITC Director, recounted the beginnings of the SPAWAR ITC in 1986 and its transition from Code 10 of the Naval Reserve Force to the Naval Reserve Information Systems Office to the newest field activity of an active duty Navy Systems Command.

"This transfer puts us in the mainstream of Navy Information Technology," he said. "We now have an increased opportunity for business, and we will bring results-based information technology solutions for business systems to the already robust SPAWAR portfolio."

Rear Adm. John Totushek, Commander, Naval Reserve Force (CNRF), said, "It is difficult to believe that it has only been five years since the Naval Reserve Information System Office came into being. I believe we had less than 50 government personnel assigned, along with some outside contractors, who were tasked to develop a master plan to guide our entry into the Information Technology world. I am very proud of the fact that our Naval Reserve played a leading role in all of this from concept to construction, to having more then 1000 people working here (at the UNO Research and Technology Park) all in a period of 18 months."

Totushek said that under the CNRF, the ITC had reached a plateau under which it would be difficult to progress, thus necessitating its transfer to the SPAWAR Systems Command under whom it would receive the Information Technology focus it needed to fulfill its ambitious charter.

"Rear Adm. Totushek has ... been a principle driver behind the transfer of one of his significant Echelon Three commands to SPAWAR for the greater good of the Navy," said Rear Adm. John Gauss, SPAWARSYSCOM Commander. He also acknowledged Dr. H. Lee Buchanan's role in recognizing the need for and pursuing the consolidation of the NRISO and SEO(MP) under the Space and Naval Warfare Systems Command.

He mentioned the role that the SPAWAR ITC and the Program Executive Officer for Information Technology (PEO-IT) would play in the Navy Marine Corps Intranet.

"The NMCI, coupled with the IT-21 initiative, establishes a global network for our Navy that will allow us to exploit information technology to fundamentally change the way we do business, achieve greater productivity and reduce the burden on our manpower requirements at sea," Gauss said.

He said that the requirement to construct the content and integrate the software and data to fully exploit the capabilities of the NMCI will need a "home."

"And Enterprise Solutions that provide content reside here at the SPAWAR ITC in New Orleans, " he said. "We are up to it. We can meet the challenge. We can seize the opportunity before us."

The SPAWAR ITC, with its detachments in Millington, TN and Washington, DC has a strength of 1,324 military and government personnel and contractors.

Tests Could Lead To Reliable Cell Phones For Sailors

By Associated Press
Norfolk Virginian-Pilot, January 29, 2001

HANAHAN, S.C. — Tests this week could give the Navy what average citizens take for granted these days — reliable cell phone service.

Contractors and technicians from the Navy's Space and Naval Warfare Systems Center here will test a system that could put cell phones in the hands of every sailor.

The massive amounts of steel used in ship building, the noise of an ongoing vessel and sometimes remote locations have kept sailors from having reliable cell phone communications.

"What we need is a communications device that will work anywhere on a ship," said **Robert Sauer**, a project manager for Shipboard Wireless Interior Communications at the Navy's SPAWAR center.

Sauer said a captain should be able to talk with anyone on a ship, regardless of their locations.

Private contractor James M. Orr Jr. of American Systems Corp. said the system's heart is called, "Wireless Voice Over Internet Protocol."

It takes off-the-rack wireless phones and tailors them to Navy needs.

Orr said the system lets sailors use existing shipboard systems like two-way radios along with wireless phones.

Cell phone antennas will relay what a person says on the wireless phone through a central network to someone on another wireless phone.

Sauer said the Navy has been working the project for more than 20 years.

"We're very close to a voice-activated system that would be universal," Sauer said.

"We have voice-activated systems now, but you can't use them everywhere on a ship because of all the background noise." he said.

The system will be tested this week on the aircraft carrier, *John F. Kennedy*, at the Mayport Naval Station near Jacksonville, Fla.

If successful, the next step would be installing a prototype system on another ship this year.

"We have to have a battle-hardened device," Orr said. "It won't break if it's dropped, plus its screen has to be back lit so you can see it in the dark."

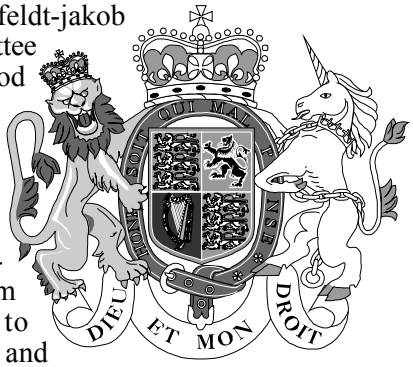
Sauer said the system also can't set off ammunition and be terrorist and hacker proof.

"We believe the Voice over Internet Protocol is the wave of the future," Sauer said. "It provides voice, data and video over the same equipment."

DoD avoids 'mad cow' disease — reiterates blood donor policy

The following information was received in a routine administrative message Feb. 5 from the Chief Information Officer, Washington, D.C., with guidance concerning mad cow disease and the blood supply.

The Food and Drug Administration (FDA) held a meeting on Jan. 18 with the transmissible spongiform encephalopathy advisory committee (TSEAC). The committee considered changing the current deferral of blood donations from individuals who, between 1980-1996, had spent six months or more in the United Kingdom (UK). They also considered whether residents or travelers to other European countries should be deferred because of the possible risk of transmitting an unusual and rare brain disease called variant creutzfeldt-jakob disease (VCJD). The committee voted not to change the blood donor deferral policies concerning residence in or travel to the UK. As a cautionary measure, the committee recommended that the FDA consider deferring blood donations from residents of or travelers to France, Republic of Ireland and Portugal who have an aggregate of ten years residence in these countries. An FDA decision is expected within the next few weeks. Until the FDA issues its guidance and the American Red Cross (ARC) implements its new policy, DoD will follow current policy.



Current policy: In Dec. 1999, at the recommendation of the FDA, any person who spent more than six months in the UK between 1980 and 1996 was deferred from donating blood into the U.S. blood supply. This action was taken to avoid the extremely remote possibility of transmitting VCJD. This blood donation deferral is also DoD's current policy for its personnel.

The deferral was prudent because it is possible, but not yet proven, that there may be a connection between eating beef from cattle infected with a similar disease, (bovine spongiform encephalopathy — BSE) which was present in the UK at the time.

Current medical and scientific literature indicates that service members should not be alarmed about their health. The incidence of VCJD in the indigenous European population is extremely low. Further research is required to determine possible health risks, if any, to DoD personnel who are or were stationed in Europe.

Should the ARC change its deferral policy for anyone who lived in Western Europe, DoD will evaluate the ARC policy and FDA guidance to determine what precautionary standard of practice will be implemented.

JOINT 'threat warning' system explored

By David Coldren
JTWS Project Engineer, J713DC

On Aug. 15, 2000, the United States Special Operations Command (USSOCOM) announced the Joint Threat Warning System Architecture (JTWS) concept in the *Commerce Business Daily* (CBD). A three-day conference at SSC Charleston Oct. 3-5, 2000, followed that announcement. During the conference, government representatives of SSC Charleston and USSOCOM shared the JTWS system concept with industry participants. To provide a better, more efficient JTWS architecture and to strengthen this concept, the government previously solicited information from industry. As a result, many presentations were conducted at the conference outlining specific technologies, architectures, or commercial products that could aid developers at SSC Charleston, USSOCOM and CECOM.

The JTWS, USSOCOM's future system, will provide threat warning, situational awareness, and target activity reporting to Special Operations Forces (SOF) tactical commanders deployed worldwide. The data provided by JTWS may originate from local/on-board signals intelligence, non-organic Intelligence Broadcast System, non-organic imagery, unattended ground sensors, unattended aerial vehicle sensors, information from other team members, or from a source not yet identified. JTWS' over-riding purpose is to provide threat signal identification and tailored processed threat warning information required to successfully prosecute the mission.

JTWS will comprise variants for SOF aircraft, maritime platforms, and be carried by SOF team members. JTWS, both modular and scaleable, uses current and cutting-edge commercial technologies. Plug-and-play hardware components allow the addition or removal of components from the system or movement from one variant to another. The plug-and-play hardware and common core software concepts enable each variant to be easily tailored to the mission and the target.

The aircraft version of JTWS is scheduled for Airforce Special Operations Command aircraft. The maritime version will be installed on board the Patrol Coastal and the Mark V Special Operations Craft. There will be three ground forces versions: an individually worn harness or vest with a minimal radio frequency (RF) detection and emitter direction finding (DF) capability; a battery powered system that is a functional follow-on to the current AN/PRD-13 (V)2; and a team transportable system (either carried by four or five team members or one HMMWV).

JTWS conference presentations outlined specific technologies, architectures, or commercial products that could aid government developers

Industry participants in the JTWS Potential Sources Forum included representatives from: BTG Inc., ITT Industries, Planning Systems, General Dynamics, Raytheon, Titan SPD, Computer Sciences Corporation, SAIC, Sanders, TDS Inc., Northrup Grumman Corporation, Comptek PRB Associates, Digital Access Corporation, Booz-Allen Hamilton, SensyTech, Logicon, ARINC, Digital Receiver Technologies, Southwest Research Institute, INNOLOG, Electronic Warfare Associates (EWA), Tera Research, Eclipse, Teledyne Brown Engineering, Georgia Technical Research Institute, Condor Systems and Scientific Research Corporation.

DeCA Project Team provides outstanding customer service

By Suzan Vaughan (J6423/Norfolk) and Sharon Anderson (J64/Norfolk)

"We have a terrific team working on the various DeCA Projects. Some have been working on these projects since 1994," says **Ben Wallace**. Ben is the head of the Communications Support Services Section (J6423) in the Network and Communications Services Branch, Computer Services Division of the Command and Control Systems Department.

Defense Commissary Agency

Since 1994, the Defense Commissary Agency (DeCA) Project has been one of the largest customers of the Computer Services Division. SPAWAR employees provide a variety of support to DeCA's worldwide communications infrastructure that encompasses DeCA Headquarters, four regional offices, and approximately 300 commissaries.

Several people work at DeCA Headquarters in Ft. Lee, Va. **Steve Wright**, **Terry Keeling** and **Tyrone Carter** monitor the wide area network using Cabletron Spectrum software. They troubleshoot outages and assist end-users with communications equipment replacement and upgrades. Steve also assists with the network design and implementation of upgrades at the headquarters and regional offices' local and wide area networks.

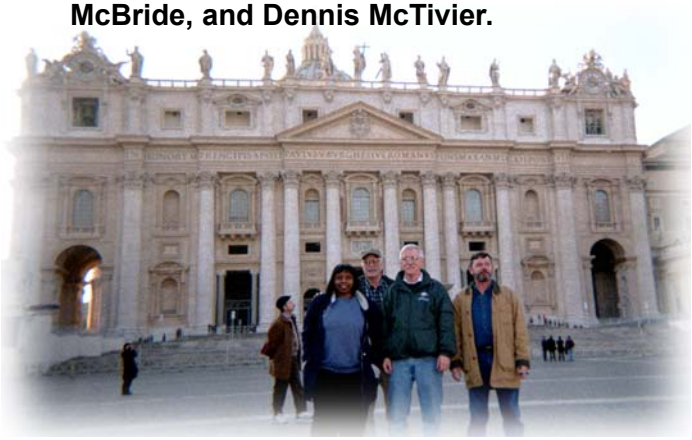
Deborah Sawyer supports the Router Shop by configuring Cisco routers and Cabletron Smartswitches for use at new installations and as replacements for failed units. She also performs on-line configuration updates as the network design changes, and she manages DeCA's IP address system. **Jim Crump** supports the Store Infrastructure and Telephone Shop by reviewing construction plans for new and renovated DeCA sites to determine if the data and voice cabling plans are appropriate. He also provides end-users with guidance for telephone system purchase and maintenance.

David Gillum, **Dee Griffin**, **Don Wold** and **John Maupin** support the TSR (Telecommunications Service Requests) Shop by ordering the circuit installations and upgrades needed to support DeCA's wide area network. They have been involved in several forms of data transport including NIPRNET, ISDN, VSAT and frame relay. Most recently, they participated as members of the DoD FTS 2001 Transition Team to migrate voice and data service for the FTS 2000 contract with AT&T to the FTS 2001 contract with MCI/Sprint. All of the folks assigned to Ft. Lee spend a great deal of time away from their homes and families without complaint and are truly committed to the DeCA Project.

The Deployment Team, supporting DeCA's communications infrastructure initiatives, travels extensively to the commissaries around the world installing local and wide area network upgrades. They have installed Cisco router networks, Cabletron hubs and SmartSwitches, and data cabling systems, and have reconfigured IP addresses on PCs and Point-of-Sale equipment as the DeCA network has grown increasingly sophisticated over the last six years. The teams consist of personnel from the Norfolk office augmented, at various times, by staff at the Newport, Jacksonville, Washington D.C. and Pensacola offices. Most recently, personnel from SPAWAR Charleston have also provided expertise in electrical and data cabling to support an 802.11 compliant RF network upgrade at the commissaries. The Deployment Team is currently focusing on data cabling plant upgrades at the approximately 65 European sites. In addition to the arduous travel schedule and physical demands of this work, the team is also constrained by working in an operational environment. Between sales floor hours, warehouse deliveries and cleaning crews, there is literally no time when their work can be performed without the potential for affecting commissary operations. For these deployments to be successful and efficient, a great deal of behind the scenes efforts also occurs. Continual logistical coordination and problem-solving occurs to get the right materials, tools and people on-site. Team work is what makes this group a success — everyone's role is crucial and each person is valued for their unique contribution to the project.

The entire Project Team appreciates their DeCA customer and looks forward to continuing their long-term partnership.

Naples Team (below) in front of St. Peter's Cathedral in Vatican City. From left, Diane White, Dennis Houk, Pat McBride, and Dennis McTivier.

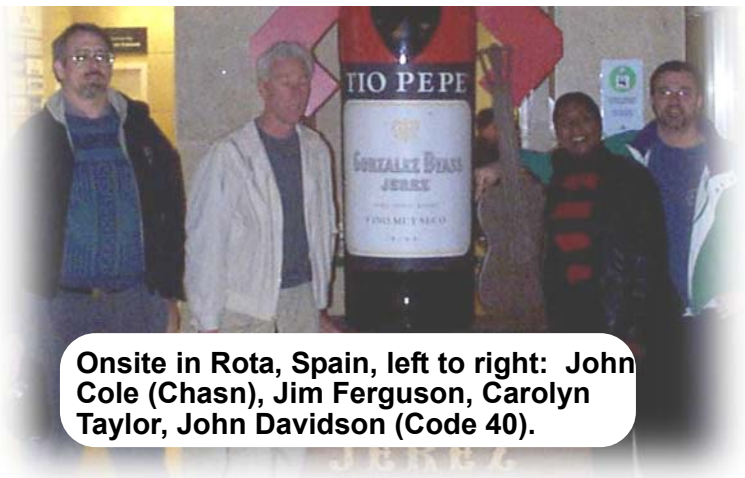


Deployment Team: Back row from left to right: Al Wilkerson, Ben Wallace; middle row left to right: Suzan Vaughan, Pat Behan, Ken Edoff, Bazil Duncan; front row: Ellen Renn, Doris Welch, Ann Dillon, Jessica Kiehl.

Onsite at Ft. Lee in Enterprise Management Center. Seated in front Steve Wright and Tyrone Carter.

Ft. Lee Staff onsite
Back row from left to right: Jim Crump, Deborah Sawyer, Dee Griffin, Don Wold, Seated from left to right: David Gillum John Maupin.

Onsite in Sigonella, Italy, from left to right: Terry Keeling, Larry Hughey, Shirley Fields, Kyle Condon (Charleston).



Onsite in Rota, Spain, left to right: John Cole (Chasn), Jim Ferguson, Carolyn Taylor, John Davidson (Code 40).

Making history...

1st SPAWAR women land on Antarctica

By Carole Moore
ATS Logistics and Systems Support Branch, J317CM

Deborah Young and I traveled with **Robert von Allmen** (J30) to McMurdo Station, Antarctica, on Nov. 4, 2000, becoming the first women from SSC Charleston to set foot on the Antarctic continent. Deborah and I work on the Aviation Technical Services (ATS) Program in the Air Traffic Control Division (J31), and are in the ATS Logistics and Systems Support Branch (J317). The ATS Program, designated as Antarctic Program Office (headed by **Jim Webb**, J31B), provides operational support to the U. S. Antarctic Program (USAP) under a Memorandum of Agreement between the National Science Foundation (NSF) and SSC Charleston. This USAP operational support comprises air traffic control, ground electronics maintenance, meteorological forecasting, and observing services, as well as engineering and logistical support. The National Science Foundation, an independent government agency, was chartered to manage and oversee our nation's Antarctic Program by maintaining a presence and conducting scientific research on the Antarctic continent.

As members of the ATS footprint, Deborah and I performed the annual *on-ice* ATS equipment and repair parts inventory used to update the Aviation Technical Services' Master Inventory List. Due to the long logistics lines and paucity of shipment options between Charleston and the Antarctic, it is imperative to verify systems and equipment, as well as inventory the repair parts for each of those items. After all, you can't just call a manufacturer, go down the street to the vendor or order parts from the government stock system and expect to receive that material with the same ease and rapidity as other sites in the world. Deborah and I also assisted with locating and staging ATS test equipment requiring calibration, as well as the documentation of equipment, material and parts to be returned to Charleston at the end of the season for repair and/or disposition.

Just like all prospective USAP personnel either assigned to, or seeking travel to and work on the Antarctic continent, we were required to pass stringent physical and dental examinations—a necessity based on limited medical facilities at McMurdo Station, and the lengthy transport time

of a patient to New Zealand, the nearest fully-equipped medical facility.

Deborah and I agree that the trip to and from Antarctica alone, is a test of endurance all by itself. The trip from Charleston to Christchurch, New Zealand, the USAP jumping off point for flights to McMurdo Station, takes a minimum of four flights and approximately 20 hours of flying. From Christchurch to McMurdo Station is another flight lasting six to eight hours depending on aircraft type (military aircraft) and weather conditions. Our brief stop in Christchurch, like that for all south-bound personnel, was just long enough to be outfitted with ECW (extreme cold weather) clothing, attend safety briefings, store personal items, and be manifested on one of the various military aircraft that transports USAP personnel and cargo between Christchurch and McMurdo Station.

McMurdo Station, the arrival and departure point for travel to, from, and on the Antarctic continent, has an austral summer (October to February) population of approximately 1,200 people, and drops to between 100 and 200 during the winter (March to October). The austral summer season is a dizzying period of activity that includes the seasonal opening and closing of remote science camps, supporting continent-wide scientific research, transportation of scientists, grantees and support personnel, supplying and replenishing supplies at permanent U.S. installations on the Antarctic continent. Just like the infrastructure and facilities of any community, the permanent USAP installations (McMurdo, South Pole and Palmer Station) require year-round maintenance—in summer while operations continue at a frenetic pace, as well as winter when skeleton crews complete the close out of one summer season, perform maintenance and begin preparations for the next summer. This is a huge undertaking given that Antarctica is the coldest, highest, driest, and windiest continent on Earth. The logistics involved in the year-to-year planning are complex and laborious due to the coordination effort by all participants for the provisions, materials, fuel and supplies required for the season.

I was notably impressed with the coordination between the various ATS operational functions, ground electronics maintenance, air traffic control, weather forecasting, communications and ATS logistics commensurate with the NSF's operations, the Air National Guard and other USAP participants. These folks are enthusiastic and definitely have a passion for the work being done in Antarctica. Deborah said, "We were also impressed by the efficiency of the operations on the ice – everything from food service, lodging, transportation, waste disposal, and medical services to morale and welfare. Everyone there is dedicated to supporting the scientists and grantees who are engaged in the study of plants, wildlife, ecology and environmental concerns." This trip gave us a new perspective of all the many facets and personnel that make up the United States Antarctic Program.

Carole Moore (left) and Deborah Young, all decked out in their extreme-cold-weather gear, stand outside one of the buildings at McMurdo Station.

During our brief stay in McMurdo, we enjoyed some sightseeing opportunities, including a hike to Scott's hut, a window tour of Scott (New Zealand) Base and a tour of the Air Traffic Control facilities on the Ice. One of the unusual experiences we encountered was the daylight 24 hours a day. No matter what time we went outside, the sun was shining, only it's position in the sky changed. We soon realized that due to the quick changes in weather, the bitter cold, breathtaking but Spartan landscape, and other hidden dangers, Antarctica is a captivating and beautiful place that is also very dangerous.

As we awaited our departure back to Christchurch, New Zealand, we stood in awe of the beauty and majesty of Mt. Erebus and the incredible view of the distant Black Mountains with snow covering the landscape. As the doors to the C-130 aircraft closed, we took one last look at that vast land of ice and wind and agreed that the Antarctic splendor is beyond anyone's imagination and that we had enjoyed the experience of a lifetime.

MWRNet:

Bringing the Internet to the Balkans for our Deployed Service Members

By Jim Condon

Historically, deployed service members kept in touch with their family and friends with a letter or an occasional telephone call. With the rapid expansion and availability of the Internet, e-mail is taking the place of these more traditional communication methods. Thanks to the efforts of the United States Army Europe (USAREUR) Morale, Welfare, and Recreation (MWR) Section, and the European Office of the Space and Naval Warfare Systems Center Charleston (SPAWAR Europe), service members deployed in the Balkans now have high-speed commercial Internet access that can be used for personal e-mail and distance education. In addition to these, service members can also use Video Teleconferencing (VTC) services to stay in touch with family and friends.

BACKGROUND

In March 2000, USAREUR MWR sought the support of SPAWAR Europe, headquartered in Stuttgart, Germany, to provide a turnkey solution that included the development and implementation of a voice, video, and data network to support connectivity for their Cyber Cafés in the Balkans.

The MWR Cyber Cafés are facilities where deployed service members can go to use Personal Computers (PC), access the Internet, participate in a VTC, and perform distance learning. At that time, USAREUR MWR had Cyber Cafés on the following nine base camps:

Eagle Base, Bosnia-Herzegovina
Comanche Base, Bosnia-Herzegovina
Camp McGovern, Bosnia-Herzegovina
Camp Dobol, Bosnia-Herzegovina
Butmir 2000, Bosnia-Herzegovina
Camp Bondsteel, Kosovo
Camp Monteith, Kosovo
Taszar Main, Hungary
Camp Able Sentry, Macedonia

IMPLEMENTATION

SPAWAR Europe accepted the challenge and began project design and execution in April 2000. The system became known as MWRNe*t*.

We divided the project execution into two phases. Phase I, which uses leased commercial satellite services to provide immediate connectivity; and Phase II, which involves the design, procurement, and installation of government-owned commercial satellite equipment. This approach, owning versus leasing,

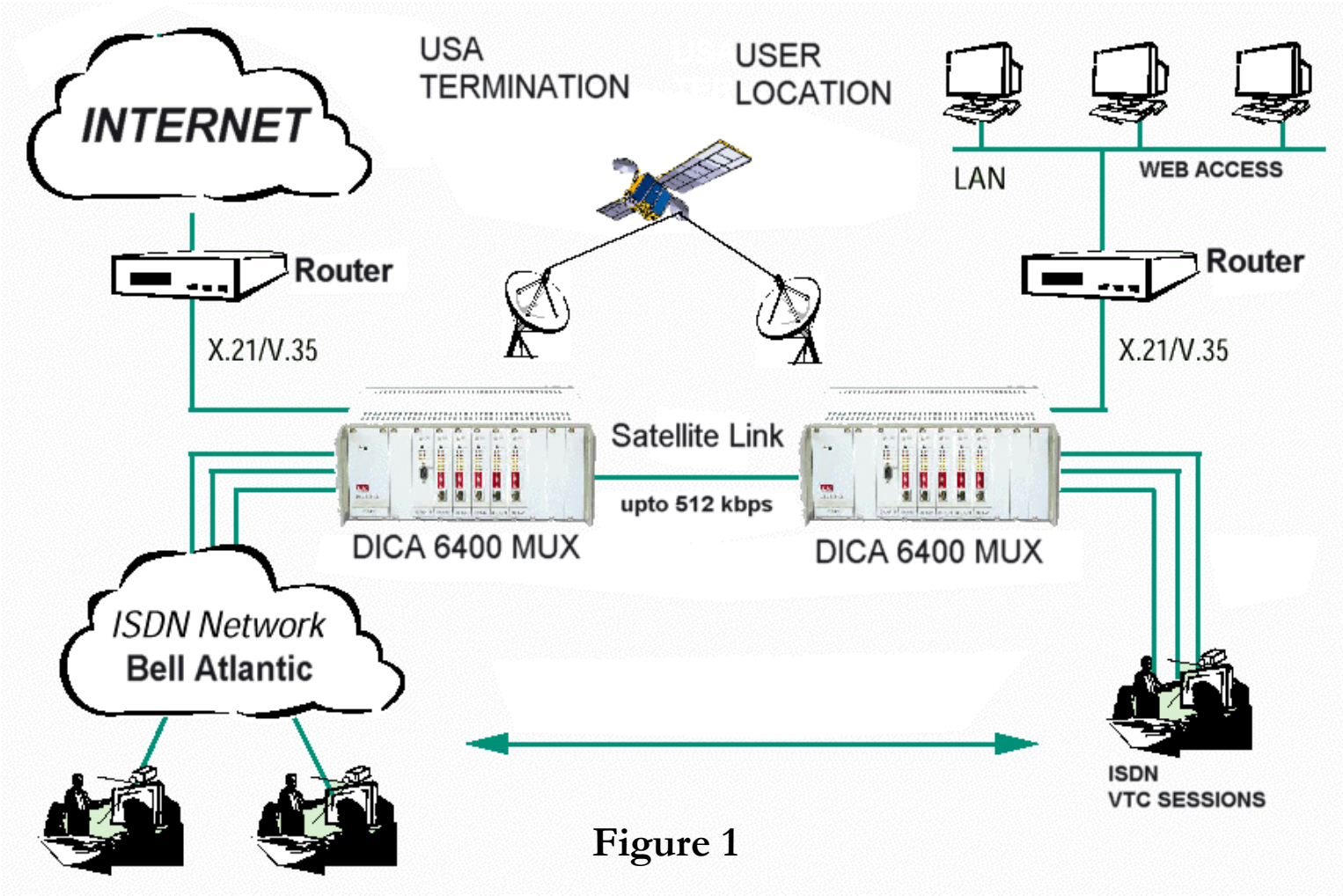


Figure 1

will provide a complete return-on-investment in less than three years. Phase II also includes the construction of a Network Operations Center (NOC) and commercial satellite Master Earth Station at Thompkins Barracks, Heidelberg, Germany. The first phase will last six months from September 2000 to March 2001. The cut-over from Phase I to Phase II will take place in January and February of 2001.

DESIGN CRITERIA

Our proposal to USAREUR MWR provides a turnkey solution to satisfy time-critical requirements for voice, video, and data services at the nine base camps including commercial Internet access and VTC capability.

We used the following set of high-level design requirements:

- Commercial satellite due to the unavailability of adequate terrestrial infrastructure.
- Internet access at each base camp with bandwidths ranging from 256K to 512K.
- Capability to perform nine simultaneous 128K H.320 VTCs — one from each base camp.
- Dynamic satellite bandwidth allocation and bandwidth efficiency.
- Open architecture and future growth capability.
- Information Assurance, for example, a firewall at the NOC.
- High mean-time between failure rates.
- Remote management, diagnostics, and troubleshooting capabilities.

PHASE I

Phase I includes the use of Very Small Aperture Terminals (VSAT). These satellite terminals get their name from the small size of the satellite dish, 2.4 meters in this instance. We leased one terminal for each of the nine base camps. The VSAT is mounted in a 19-inch rack and includes a satellite modem, router, multiplexer (mux) and uninterruptible power supply (UPS). The satellite dish and a high power amplifier are mounted external to the Cyber Café.

In addition to the installation of this equipment, we had to obtain the space segment (INTELSAT 601 Ku-band), host nation approval, register the VSAT, and obtain Teleport services, Integrated Services Digital Network (ISDN) service, and commercial Internet access.

Since many of the base camps have more than one Cyber Café and some of them three, the Internet Protocol (IP) and ISDN connectivity had to be distributed across the base camp. All PCs and printers were configured and then interfaced to the router in the VSAT via HP Fast Ethernet Switches, fiber transceivers, aerial multi-mode fiber optic cable, and Category 5 copper cable. Figure 1 illustrates the configuration used. Figure 2 shows one of nine VSATs.

We purchased and installed Polycom ViewStation 128 ISDN VTC suites for each base camp. At the same time,

Figure 2

USAREUR MWR added VTC suites to each of its Family Assistance Centers in Europe. This allows deployed service members and their families in the U.S. to actually see and hear one another. SPAWAR Europe's commercial partners on Phase I were M.C. Dean, Inc. and Spacelink International, Inc.

PHASE II

In September 2000, construction began on the NOC and the 7.6-meter antenna foundation. Phase II is illustrated below in Figure 3. Completion is scheduled for January 2001. The NOC will function as the Master Earth Station and control center for the system. The entire network will be monitored and controlled from the NOC, including: all system administration, performance monitoring, remote maintenance, software updates, virus scanning, IP network address translation, information assurance, configuration management, storage, and connection to the terrestrial infrastructure. The connection to the terrestrial infrastructure includes 4MB of Internet access provided by MCI WorldCom and one ISDN Primary Rate Interface (PRI) provided by Deutsch Telecom.

One telecommunication technician and one computer specialist located at the NOC will provide 24x7 operations and maintenance (O&M) of the system. The NOC is managed by Dave Arellanes of SPAWAR Europe. In addition to leading the SPAWAR Europe O&M Branch, Mr. Arellanes has been instrumental in the design and installation phases of MWRNet.

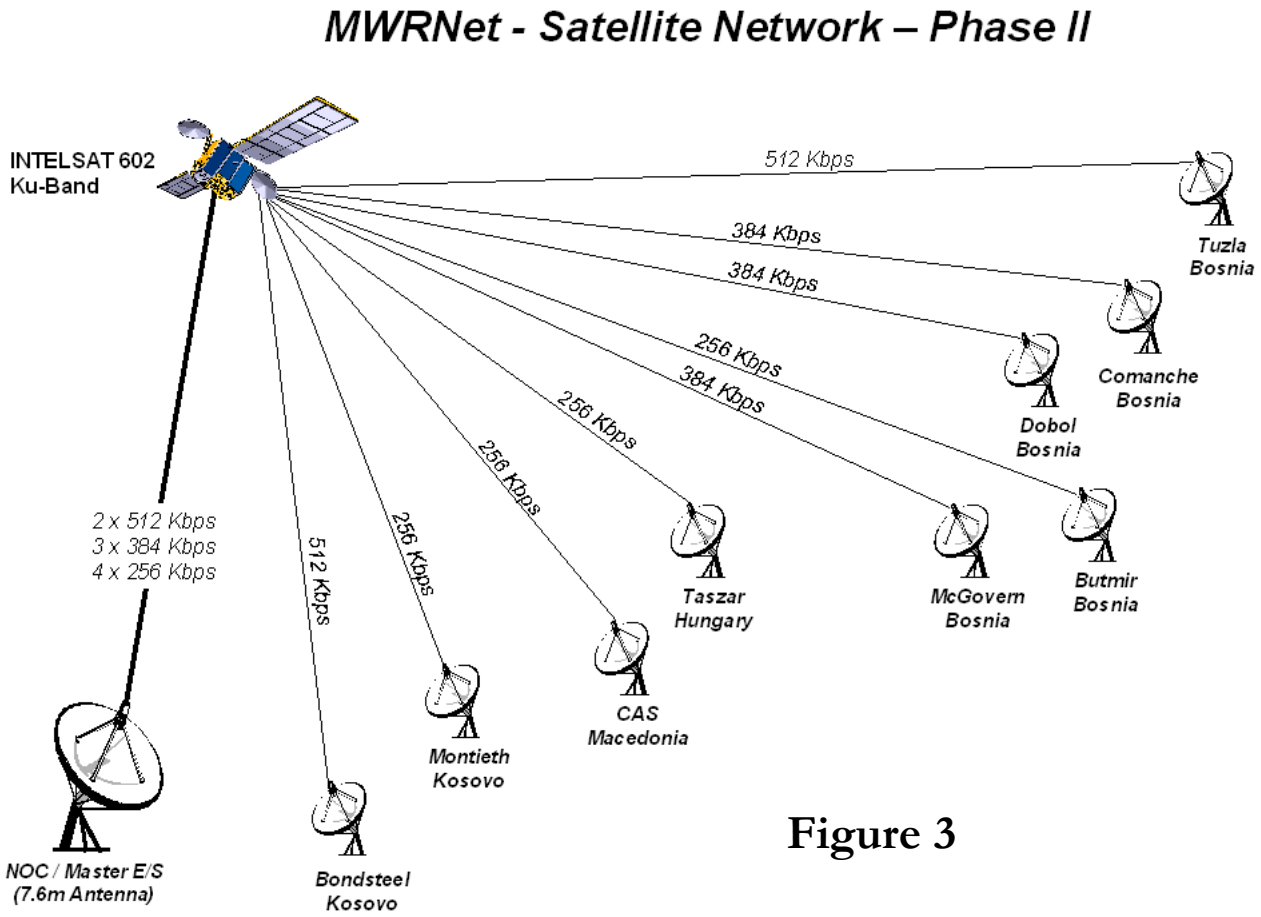


Figure 3

Figure 4

CYBER CUBES

The Phase II VSAT will be installed inside of a 10x10x8 foot self-contained communications shelter. Rick Boyer, one of the SPAWAR Charleston team members, coined the term "Cyber Cube" for the shelter. These communications and automation shelters will be colocated with the main Cyber Café on each base camp. Figure 4 above is an example of a Cyber Cafe. The Cyber Cube will interface to existing PCs, printers, and VTC suites using the local area network (LAN) and cable infrastructure installed during Phase I.

The environmentally controlled Cyber Cubes, in addition to housing the VSAT equipment, will allow for future growth and provide a location to stock local spare equipment. The system is designed to expand to 4MB of Internet/VTC bandwidth at each base camp with no new hardware or software required. All that is needed is an increase in the space segment lease.

The 2.4m satellite dish will mount to the top of a six-inch diameter antenna pole that is mounted to the side of the Cyber Cube. The Cyber Cube itself will be bolted to the concrete pad it sits atop, providing stability and structural integrity for the Cube and dish.

A Windows 2000 server will be installed in each Cyber Cube providing a local proxy server and Web caching. The Phase II system was designed by a team of SPAWAR Charleston personnel including Ace McCreight, Rick Boyer, Arnel Castillo, and David Wagers.

FUTURE UPGRADES

When Phase II is complete, work will begin on numerous system feature upgrades. These will include the following:

- A Web-based VTC scheduling system that will simplify the process of coordinating, scheduling, and arranging MWR VTCs.
- The addition of IP (H.323) VTC to the existing ISDN (H.320) VTC capability.
- The ability to make MWR voice calls.
- Multicast streaming of Armed Forces Network (AFN) video.

CONCLUSION

The goal of MWRNet is to improve the morale and quality of life for the service members deployed in the Balkans. With that goal in mind, the program has been extremely successful and very popular with service members. At two of the base camps, Bondsteel and Monteith, there were more than 6000 user sessions in the first week of implementation.

Figure 5 below simulates a family VTC session. The impact of high speed Internet access and VTC capability continues to strengthen family ties and serves to bring "peace of mind" to the parents, family and friends of deployed service members serving their country in "harm's way."

Jim Condon is the Senior Manager for SPAWAR Europe Headquartered in Stuttgart, Germany. He may be reached at condonj@spawar.navy.mil, DSN 314-421-4058, or commercial 49-711-729-4058.

(This article is reproduced with permission of CHIPS Magazine, Winter 2001, Volume XVIII Issue V. See page 23 on how to be a CHIPS subscriber.)

Figure 5

over 348 years of experience lost when 11 retire

William F. Rader, a DP-856-III technical specialist in the Naval Systems Shipboard Introduction and Test Branch (J343), retired Jan. 2 after 35 years and seven months of service. Throughout his career, Willie's experience, knowledge, and dedication to the U.S. Navy navigation program have been instrumental in the development and fleet introduction of both sea and space systems, earning respect and honors from peers.

Willie's service to our country began in 1967 as a WG-8 electronics worker at the Naval Air Station North Island. As he moved through various positions and commands, Willie was considered a technical expert in navigation systems. His continued exceptional performance earned him a promotion to the DP-III level in 1995.

William E. Hale, a DP-334-III lead technical specialist in the Computer Information Technology Department (J40) in our Washington, D.C., office, retired Jan. 3 following 34 years and three months of dedicated civilian and Navy military service to this country. Since Jan. 1971, Bill has been a part of this organization, and its predecessors, as a computer specialist, computer systems analyst, and computer programmer. Prior to 1971, Bill served in the U.S. Marine Corps for four years and four months.

Bill has performed some of the more diverse work required to support Defense Finance and Accounting Service (DFAS) cash accountability production systems. Not only is he the leading deposits-in-transit financial system specialist, but he coordinates a significant portion of the personal computer, file transfer, and local and wide area connectivity requirements for the various systems under DFAS control. He thoroughly understands many aspects of computing and financial systems and is an authority in many fields.

Bill's level of expertise will be difficult to replace. His assistance, knowledge, drive to accomplish, and outstanding customer support has served the Navy well.

Stanley Randall, a DT-856-II technical specialist in the Navigation/NAVICP Branch (J6231), retired Jan. 3 following 34 years and five months of dedicated service. After serving nearly three years in the U.S. military, Stanley's civil service career began in 1969 when he entered the apprentice program at the former Charleston Naval Shipyard.

Stanley was a WG-11 electronics mechanic when the Engineering Support Facility (J60) was transferred to SSC Charleston by the Base Realignment and Closure Commission (BRAC) in 1994.

Benjamin L. Massey, a DP-855-III engineer in the Tidewater Support/Special Projects Branch (J514) in Portsmouth, Va., retired Jan. 3 after 21 years and six months of dedicated service. He had been with this command since Feb. 1995.

Harold P. Sheely, Jr., a DS-334-III technical specialist in the Network and Communications Services Branch (J642) in Norfolk, Va., retired Jan. 3 following 35 years and seven months of dedicated service.

Harold has been with SSC Charleston since Feb. 2000. He began his civil service career in Nov. 1965 as a Warehouseman at the Naval Supply Center in Norfolk, Va. Just a year later, he transferred to the Overhaul and Repair facility at the Naval Air Station as an electronics helper where he was soon promoted to an electronics worker. Harold was accepted into the apprentice program as an aircraft engine mechanic in 1968; however, a 1969 reduction-in-force forced him to take a GS-3 electronic accounting machine operator position. His leadership abilities took him all the way up the career ladder to the position of head of the Production Operations Division of the Data Processing Installation within the Naval Regional Data Automation Center in Norfolk, Va. And that's where Harold was when the 1994 BRAC disestablished the Data Processing Installation. He was reassigned as a computer specialist in the Naval Computer and Telecommunications Command Atlantic, which recently merged with SSC Charleston.

Edward Willard Blair, a DT-856-II technician in the Metrology/LAU/Calibration Branch (J621), retired Jan. 3 after 35 years and ten months of dedicated service.

Throughout his career, Edward worked in the Engineering Support Facility (J62) at the former Charleston Navy Shipyard, which BRAC transferred to SSC Charleston in 1994.

Carl L. Reeves, a DP-855-IV manager and head of the Communication Systems Department (J50), retired Jan. 3 following 30 years and four months of loyal and truly dedicated service. After serving four years in the U.S. Navy, Carl returned to school and earned his engineering degree. In 1974, Carl joined the Electronic Systems Engineering Center, Southeast Division, one of the many predecessors of SSC Charleston. With a very notable career, Carl rapidly advanced through the ranks to become a department head and leader of nearly 450 engineering, technical, and staff employees — earning a master's degree in management along the way.

Noticed for his honor, courage and commitment, Carl fostered the notion that teamwork leads to success, and regularly demonstrated this notion while successfully leading his department. Teamwork was the watchword that

guided his work in the past and will carry over into the operations of this command as long as it stands. In her letter to Carl upon his retirement, Capt. Deitch said, "There is too little room here to enumerate the many projects and programs you brought to fruition, the quantity of issues resolved, or the number of employees you have mentored, coached, and counseled. There is no way to express the respect you have gained over the years; no way to convey this command's thanks for the extent and consistency of your selfless service. However, the memory of your good works and the leadership you exercised will live on as an example for all."

Ronald H. Maguire, Jr., a DT-856-II technician in the Metrology/LAU/Calibration Branch (J621), retired Jan. 3 following 26 years and two months of dedicated service.

Throughout his career, Ron worked in the Engineering Support Facility (J62) at the former Charleston Navy Shipyard, which BRAC transferred to SSC Charleston in 1994.

Benjamin Bailey, Jr., a DT-856-II technician in the Navigation/NAVICP Branch (J623), retired Jan. 31 following 35 years and eight months of dedicated service.

Throughout his career, Ben worked in the Engineering Support Facility (J62) at the former Charleston Navy Shipyard, which BRAC transferred to SSC Charleston in 1994.

Darothey S. Shriner, a DT-856-II technician in the Navigation/NAVICP Branch (J623), retired Jan. 1 following 27 years and eight months of dedicated service.

Dot first served this country in the U.S. Air Force for three years. Her federal civil service began in Aug. 1976 when she was hired as a chemist for the powerhouse and shipyard boiler plants within the former Charleston Naval Shipyard. In Nov. 1979, Dot entered the apprentice program in the Engineering Support Facility where she remained following graduation until her retirement.

Curtis W. Cox, a DP-334-III technical specialist in the Defense Messaging Systems and WEB Technical Services Branch (J762) in our Washington, D.C., office, retired Jan. 3 following 31 years and one month of dedicated service.

Curtis began his civil service career in 1971 as a GS-11 computer specialist at the former Naval Command Systems Support Activity where he progressed to GS-13 system programmer. During his career, Curtis was involved in programming and information technology at every level — from bootable machine language to high level languages for information management systems; from writing compilers and interpreters to maintaining main frame operating systems and an assortment of servers and networks. Curtis participated in the design and implementation of the automated resource management system for the office of Naval Research and was the technical and administrative agent of the U.S. Navy Registration Authority. He was also involved in developing the Defense Message System Sup-Registration Authority Procedures, the DMS Delegation document, DMS Local Registration Procedures, Architecture and Transition Strategy/Deployment Plan, and the Directory Services Near Term Strategy and Transition Plan.

Curtis also served as the senior technical lead for the SPAWAR DoN DMS Directory Development and Implementation Project.

To each of you we say, "thank you for a job well done!" You have served your country, the U.S. Navy, and SSC Charleston very well. While the loss of your expertise, your shared experiences, and your individual abilities will surely be felt throughout the Navy community, your long years of devoted service to the fleet, to this command, and our country have truly earned you this retirement.

We wish for each of you many years of good health, prosperity, happiness, and joy. We salute you for your many years of faithful service, and in the traditional Navy way, we wish you

Fair winds and following seas!

Are you moving?

If you receive *The Chronicle* by mail, remember to include us when you send out your change of address cards. When *The Chronicle* is returned to us marked "no forwarding address," we delete that person from our mailing list. If you want to continue receiving *The Chronicle*, don't forget to notify us of your new address. For your convenience, you can complete the information below, clip this notice, and place it in a stamped envelope addressed to:

SPAWAR SYSTEMS CENTER CHARLESTON
CODE 0A6LS
PO BOX 190022
N CHARLESTON SC 29419-9022

Yes, I want to continue receiving The Chronicle — here is my new address:

Name:_____

Address:_____

City/State/Zip:_____

OR, send an email to silversl@spawar.navy.mil — OR, telephone 843-218-4021

New policy for government travel cards

By Terry Watkins
Head, Business Services Department, J10

As of Dec. 1, 2000, Bank of America (BOA) no longer accepts reinstatement requests for *Travel Card Individually Billed Accounts* that have been canceled or revoked due to delinquency. Presently, the only request BOA will accept is if BOA made an error itself. The current DoD contract does not allow for errors or delays made by the Personnel Support Detachments (PSD) or Defense Finance Accounting Service (DFAS) in reimbursing claims as a reason for reinstatement. DoD plans to meet with BOA to negotiate a stipulation within the contract to consider reinstatement requests if PSD or DFAS made an error or delay.

In order to keep your account in good standing, follow these guidelines:

✈ File travel claims within five working days of completion of travel;

✈ file partial claims every 30 days if travel exceeds 45 days;

✈ notify the travel office if you have not received your reimbursement within 15 working days of filing; and

✈ ensure all required receipts are attached to your claim and all items claimed are authorized within your orders when submitting for reimbursement.

BOA will continue to send cardholders statements which identify past due amounts. BOA will make friendly calls to remind cardholders of delinquencies that are 30 to 60 days past due.

The SSC Charleston Agency Program Coordinator will continue to notify department heads of cardholders 60 days past due by memorandum.

Cardholder accounts revoked for delinquent payments are not authorized advances per the Joint Travel Regulations. If a cardholder has taken all of the above steps to keep their card in good standing and the card is revoked, SSC Charleston will make every effort to get that employee an advance for future travel until DoD can negotiate a reinstatement policy if the error was made by PSD or DFAS.

Our Travel Offices will assist our employees as much as possible.

According to a Per Diem, Travel and Transportation Allowance Committee message R 221528Z JAN01, the mileage rates for local and TDY travel have changed as follows effective Jan. 22, 2001: Privately owned automobile rate is now **$.345** per mile; privately owned motorcycle rate is now **$.275** per mile; and privately owned airplane rate allowance is now **$.965** per mile.

Leave Donor Program — thanks to YOU, a huge success

By Eleanor Aldrich
Head, Administrative Services Office, J0A4

The Leave Donor Program is alive and well at SSC Charleston. Thirty two employees received 4,201 hours of leave from generous coworkers last year, and 184 hours from other agencies. Those 4,385 hours helped employees through serious illnesses or allowed them to care for a family member.

Some people generously donate leave every year, dividing their hours among all those in need. Some donate as individual needs occur. Either way, our coworkers greatly benefit from this kindness.

If you find yourself in a situation without annual or sick leave, call **Ginny Dangerfield** at 843-218-5151 to explore your options and see if you qualify as a recipient in the Leave Donor Program. If you are in the Charleston area, Ginny can walk you through the whole process; or if you're not, she can put you in contact with your site representative — **Judy Soffer** (Jacksonville, Fla.), **Judy Clark** (Pensacola, Fla.), **Barbara Shelton** (Norfolk), and **Mary Pruitt** (Washington, D.C.).

This article would not be complete without expressing thanks — thanks to Ginny and the site representatives for diligently processing the necessary paperwork; and a special thanks to those who so generously donated leave. You provided much needed respite during difficult times. I know each recipient deeply appreciates your kind generosity.

Retirees 'do' lunch

If you are an SSC Charleston retiree, join your former coworkers for lunch and a little reminiscing. The retirees — and some of us wannabees — meet the second Wednesday of each month at 11:30 a.m. at Captain D's on Sam Rittenberg Blvd. in the West Ashley area. No reservations necessary.

Join Toastmasters®

Whether you're a professional, student, or retiree, Toastmasters is the best way to improve your communication skills. Toastmasters can help you lose the fear of public speaking and learn skills that will help you be more successful in whatever path you've chosen. You'll be a better listener. You'll easily lead teams and conduct meetings. You'll comfortably give and receive constructive evaluation. You already have some or all of these skills. In Toastmasters, you will enhance them.

For better listening, thinking, and speaking, visit SSC Charleston's Toastmasters meetings. They meet every other Friday in the main engineering center's executive conference room at 11:30 a.m. For further information, call **Marsha Hassell** at 843-218-4020.

Want to be a recruiter?

With our ever-changing world, recruitment and retention of qualified people become more challenging.

If visiting colleges and universities, attending career fairs, interviewing students, and helping this command sounds interesting to you, contact **Ron Alley** (alleyron@spawar.navy.mil), SSC Charleston's recruitment coordinator, for details.

Early retirements may be a possibility

This command has requested Separation Incentive Pay and Voluntary Early Retirement Authority for certain types of civilian government positions at locations outside Charleston.

If approval is received from SPAWAR headquarters and DoD, employees assigned to identified positions will be notified by letter and provided specific information.

If you receive an eligibility letter and need further information, contact your personnel management advisor — **Sherry Reeves** (codes 50, 60, and all 0 codes, with the exception of 0A and 09); **Jacque Cox** (codes 10 and 30); or **Truman Metts** (codes 0A, 09, 40, and 70).

White House issues 'Standards of Official Conduct' for government employees

Memorandum for the Heads of Executive Departments and Agencies

January 20, 2001 — Everyone who enters into public service for the United States has a duty to the American people to maintain the highest standards of integrity in government. I ask you to ensure that all personnel within your departments and agencies are familiar with, and faithfully observe, applicable ethics laws and regulations, including the following general principles from the Standards of Ethical Conduct for Employees of the Executive Branch:

1) Public service is a public trust, requiring employees to place loyalty to the Constitution, the laws, and ethical principles above private gain.

2) Employees shall not hold financial interests that conflict with the conscientious performance of duty.

3) Employees shall not engage in financial transactions using non-public government information or allow the improper use of such information to further any private interest.

4) An employee shall not, except as permitted by applicable law or regulation, solicit or accept any gift or other item of monetary value from any person or entity seeking official action from doing business with, or conducting activities regulated by the employee's agency, or whose interests may be substantially affected by the performance or nonperformance of the employee's duties.

5) Employees shall put forth honest effort in the performance of their duties.

6) Employees shall not knowingly make unauthorized commitments or promises of any kind purporting to bind the government.

7) Employees shall not knowingly make unauthorized commitments or promises of any kind purporting to bind the government.

8) Employees shall act impartially and not give preferential treatment to any private organization or individual.

9) Employees shall protect and conserve Federal property and shall not use it for other than authorized activities.

10) Employees shall not engage in outside employment or activities, including seeking or negotiating for employment, that conflict with official government duties and responsibilities.

11) Employees shall disclose waste, fraud, abuse, and corruption to appropriate authorities.

12) Employees shall satisfy in good faith their obligations as citizens, including all just financial obligations, especially those — such as Federal, State, or local taxes — that are imposed by law.

13) Employees shall adhere to all laws and regulations that provide equal opportunity for all Americans regardless of race, color, religion, sex, national origin, age, or handicap.

14) Employees shall endeavor to avoid any actions creating the appearance that they are violating applicable law or the ethical standards in applicable regulations.

Executive branch employees should also be fully aware that their post-employment activities with respect to lobbying and other forms of representation will be bound by the restrictions of 18 U.S.C. 207.

Please thank the personnel of your departments and agencies for their commitment to maintain the highest standards of integrity in government as we serve the American people.

— G. W. Bush

ESA announces 2001 activities schedule

For planning purposes, the following schedule is announced by the Employee Services Association's activities committee:

24 Feb	Annual oyster roast
13 Apr	Cake sale
05 May	Spring picnic
11 May	Mother's Day flower sale
14 Jun	Social (more information later)
09 Aug	Ice cream social
19 Oct	Pig roast
?? Dec	Holiday party (date to be announced)

If you are an SSC Charleston retiree who would like to attend an ESA function, contact **Landa Sandusky** at 843-218-4160 for ticket information.

SPAWARriors located outside of Charleston are always encouraged to attend command events whenever you're in the Charleston area.

Say what?

A recent all-hands email referred to the EMT/EMS system being cancelled due to maintenance costs. What? That could be disastrous if the Emergency Medical Technician and Emergency Medical Services were discontinued. What would we do in case of an emergency?

One employee responded to the email by asking, "Does this mean that when we dial 911, no one will come?"

Well, fortunately, this particular EMT/EMS stands for Engineering Management Tool/Engineering Management System. There's also a project called Element Management System — yet another EMS.

Acronyms have become a part of our daily language, and we assume everyone knows what we're talking about, but they can be very confusing — even embarassing. Whenever you send an email, write a letter, prepare a brief, or speak in public, always identify the complete name first, and then use the acronym for future references.

CT Spring 2001

Mark your calendars now and plan to attend the Connecting Technology Spring 2001 at the Pavillion Convention Center in Virginia Beach, Va., on May 15-17.

Meet the Navy IT experts and industry partners shaping Navy IT strategy. Keep checking the CT web site for regularly updated information and to register online: http://www.it-umbrella.navy.mil/ct.

What's happening with NMCI?

Surely by now you've heard about the Navy, Marine Corps Intranet (NMCI) — a long-term initiative between the Department of Navy (DoN) and the private sector to deliver a single integrated and coherent Department-wide network for Navy and Marine Corps shore commands. Under NMCI, the prime contractor — Electronic Data Systems (EDS) — will provide comprehensive, end-to-end information services for data, video and voice communications for DoN military and civilian personnel and deliver global connectivity to make our workforce more efficient, more productive, and better able to support the critical warfighting missions of the Navy and Marine Corps.

The NMCI contract goal is to eliminate stovepipe systems and modernize the way Navy does business. Rudy deLeon, former deputy secretary of Defense, says NMCI will "... get the government out of the business of owning and operating IT systems and transfer that function to a fee-for-service contract with the private industry."

Our deepest sympathy

to the family, friends, and coworkers of…

Russ H. Mengel, an engineer, DP-855-III, in the Information Assurance Certification, Test, and Evaluation Branch (J723), who passed away Jan. 31 at his home in Goose Creek, S.C. He was 53.

A retired Navy Chief electronics mate, Russ was employed at the former Charleston Naval Shipyard from 1989 to 1991 as an electronic technician. He earned an associates degree from Trident Technical College and his bachelor's degree in engineering from The Citadel in 1995. Russ joined SSC Charleston in May 1995.

Ann Rideout, Russ' immediate supervisor, said, "He was extremely dependable. You could always count on him to do his job and anything else that needed to be done. He was always timely and often early in completing tasks and always had a 'can do' attitude. It was the little extra things that Russ did that made him such an asset. He will be sorely missed."

Lt. Cmdr. Scott Heller (J72SH) said that Russ' "specialty was in protecting our networks from malicious code including computer viruses. This threat is very real... His efforts in ensuring an effective defense of the U.S. Navy's computer networks against malicious code contributed greatly to the security of our networks and as a direct result improved our ability to defend our country. Every ship afloat and every command ashore has benefited from Mr. Mengel's efforts and will continue to do so for the foreseeable future. Although we will carry on, we will miss Mr. Mengel's contribution to our nation's defense."

Russ is survived by his two daughters, Melissa Owens of Philadelphia, Pa., and Jennifer Cook of Goose Creek, two granddaughters, a brother, and several nieces and nephews.

Harry Beumel, a retiree from our Mayport, Fla., office, who passed away Jan. 15 in Orange Park, Fla. He was 72 years old and is survived by Gisela, his wife of 48 years; a daughter, Doris Davies; two sons, Norman and Lee; and five grandchildren.

(Editor's note: If you hear of the death of a former SPAWAR employee, please notify The Chronicle so we can inform our readers.)

General William C. Westmoreland, Charleston, SC Chapter
The Military Order of the World Wars
The Association for all Military Officers

23 January 2001

To: Captain Nancy Deitch, USN
Commander, SPAWAR Systems Center,
P.O. Box 190022, Charleston, SC 29419-9022

Dear Captain Deitch,

The General Westmoreland Chapter of the Military Order of the World Wars and The Citadel conducted the third annual *Massing of the Colors* at the Summerall Chapel last April. There were 40 color guards participating and 400 people in the audience. It was an inspiring ceremony honoring the Flag of the United States of America, the men and women who have given their lives to preserve our liberties, and to honor those who have served and are serving our country to ensure our continued freedom.

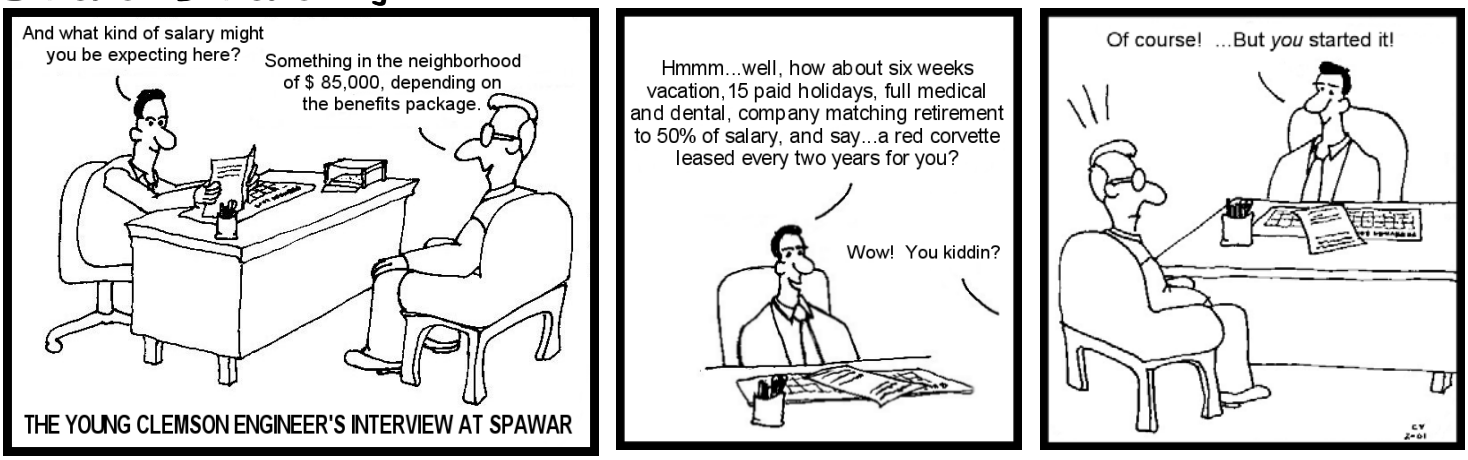
We are planning to conduct the fourth Massing of the Colors at 3 p.m. on Sunday, 11 March 2001, at the Summerall Chapel. Retired Air Force Lt. Gen. Claudius "Bud" Watts, former president of The Citadel, will be the guest speaker. He has served his country and community with distinction and is respected for his moral and ethical ideals. His remarks will be an inspiration to all attendees.

Invitations will be extended to all ROTC and JROTC units, military commands and units representing all branches of the armed forces, various groups of retired and former military personnel, and youth groups, including Boy Scouts, Girl Scouts, and the Navy League Sea Cadet, of the Low Country. Additionally, we will extend invitations to civic leaders of the Charleston area and to the general public to attend.

On behalf of the Companions of the Chapter and the president of The Citadel, I extend an invitation to you and personnel assigned to SPAWAR Systems Center to attend the fourth annual *Massing of the Colors* in the Charleston area. Please advise your members of this event, and encourage them and their families to attend this patriotic and inspiring ceremony. They should arrive in time to be seated in the chapel prior to 2:45 p.m. Parking is available on the campus.

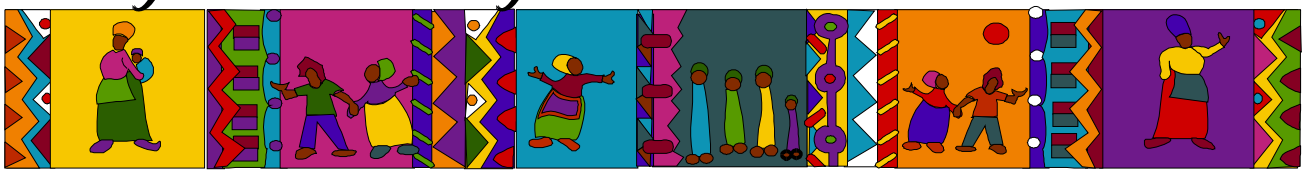
—Watt Jordan, Captain, USN (Retired)
Coordinator, MOTC - 2001

Brain Drain by Clint Veach



*(Editor's note: The Chronicle thanks **Clinton Veach** in the Security Office for providing our new corporate comic strip — BrainDrain. Hopefully, you'll get a good chuckle as each issue unfolds the humorous side of our engineering environment. If you have a topic for BrainDrain, call Clint at 843-218-6737.)*

February is Black History Month...



Little Known Black History Facts

By: Marsha Hassell, Public Affairs Officer

For those of you who listen to the *"Tom Joyner Morning Show"* every week, Tom talks about the contributions made by African-Americans to this great nation. He calls the segment, *"Little Known Black History Facts"* and credits Lady Salsa Shabazz with bringing these facts to light. While listening, I often ask myself why such life-changing contributions to the political, spiritual and technological landscape of this country are still termed, "little known"? Little known implies of little importance; yet absent the ingenuity and perseverance of these great pioneers, life might be very different in America and indeed, the world.

In 1998, I had the great fortune of meeting Lady Sala Shabazz, the author and founder of the museum, *"The Best of Little Known Black History Facts"* and *"Little Known Black History Facts,"* respectively. She had a traveling museum on display at the Charleston County Library. The museum filled an entire room with artifacts, small replicas of inventions, photos and articles attesting to the ingeniousness of a people of whom little was expected. While I consider myself fairly knowledgeable about African-American history, I stood in awe of what more I still had to learn. "Mr. Pinchback, governor of Louisiana for 35-days during reconstruction, and Queen Califia, from whose name is the origin of the name of the great state, and my home, California?"

I purchased the book, **"***The Best of Little Known Black History Facts"* and I want to share with you some of what I learned:

❑ **The Edwin Papyrus and Ebers Papyrus** Egyptian medical textbooks are considered to be the oldest in recorded history. The Edwin Papyrus textbook is believed to have been written during the 18th Dynasty, or 1550 BC. It describes 48 different injuries to the head, face, neck, thorax and spinal column and the appropriate surgical methods for treating them. There are more than 90 anatomical terms used, including the word, "brain." The Ebers Papyrus textbook contains a broad range of medical science including chapters on pulse and cardiovascular system, dermatology, dentistry, OB-GYN, ophthalmology, tumors, burns, fractures and intestinal disorders. There is evidence that physicians in Egypt practiced circumcision, brain surgery and were very knowledgeable in the area of OB-GYN.

❑ **Imhotep, a Black Egyptian** who lived about 2,980 BC was a scribe, priest, astronomer, magician and poet. He is also believed to be the first Black architect/engineer. During this time, Egyptian men were considered more skilled in medicine than any other; therefore, the Greeks sent their men to be educated in Egypt. Imhotep was forgotten for thousands of years and Hippocrates, a Greek, who lived 2000 years after Imhotep became known as the *"Father of Medicine."*

❑ **Shipbuilding** and sea exploration was an African tradition since history records show the people of Kemet, Nubia, and Ethiopia built and navigated a variety of seagoing vessels. This allowed them to transport goods and ferry huge stones for temple construction. In addition, the first use of a sail on a ship has been traced to the Nile Valley in Egypt.

❑ **Timbuktu** is considered the first university. The city of Timbuktu, located in Mali, Africa, was at one time a mega trade and market center. It was also the center of Islam and the location of the University of Sankore. The city attracted scholars from around the known world. In addition to the study of Islam, people came to Timbuktu for surgery, including the removal of cataracts.

❑ **Queen Sophia Charlotte** was an African Queen of England following her marriage to King George III in 1761. During their marriage, they had 15 children and their daughter, Alexandria Victoria became the famous, Queen Victoria.

❑ **Phillip Reed**, a slave and highly skilled mechanic, performed the difficult task of fitting the Statue of Freedom on the dome of the Capitol. The Capitol library lists Reed as being responsible for this construction.

❑ **Elijah McCoy** was employed as a railroad engineer and one of his responsibilities was to keep the moving parts of the engine lubricated. He found the task tedious and he finally automated the lubrication process. McCoy received more that 56 patents for devices that were improved versions of his automatic lubrication process. The high quality of McCoy's inventions gained such notoriety that the phrase, *"The Real McCoy"* was coined.

❑ **Dr. Shirley A. Jackson** is one of the greatest contributors to telecommunications. Jackson worked on experiments involving condensed matter and semiconductors and helped AT&T make advances in the field, including the development of the touch-tone phone, portable fax, solar cell and fiber optic cables used to provide clear sound in overseas telephone calls. Without the work of this extraordinary woman, we would not have call waiting or caller ID, and we would experience significant background noise during phone conversations.

❑ **Granville T. Wood**, a mechanical engineer, developed over 80 inventions during his 20-year career, the most noted being the Multiplex Railway Telegraph, a device which enabled moving trains to communicate with one another; thus, avoiding possible accidents. Other notable inventions include the electric generator, steam boiler furnace, an incubator, and an automatic air brake system.

❑ **Frederick M. Jones**, the first African-American member of the American Society of Engineers, invented refrigeration equipment. He later moved into radio and movie electronics and developed motion picture equipment and a ticket dispensing machine. He had more than 60 patents — 40 were for refrigeration equipment.

❑ **Hermon L.Grimes** received a patent as the inventor of the Folding Wing Aircraft used in combat for takeoff on aircraft carriers. This technology enabled the U.S. Navy to stock more planes on its aircraft carriers and gave the U.S. an advantage over Japanese carriers.

❑ **Dr. Ben Carson**, pediatric neurosurgeon, made medical history in 1985 when he successfully removed half the brain of a four-year old suffering from 150 seizures a day, and again in 1987 when he led the medical team who successfully separated Siamese twins joined at the head. He is 49 years-old.

❑ **Dr. Patricia Bath** is the inventor of the cataract laserphacoprobe, the medical instrument used to remove cataracts from the eye. Dr. Bath has four patents on the laser cataract surgery device covering the U.S., Canada, Japan, and Europe.

Still wondering about Pinchback? Well, his full name was, Pinckney Benton Stewart Pinchback and he was governor of Louisiana for 35-days. A Louisiana legislator and prominent publisher of the *New Orleans Louisianian*, he was elected president pro tempore of the Louisiana State Senate. Upon the death of the lieutenant governor, Pinchback, by constitutional order, filled the post. A year later, the governor was suspended under threat of impeachment and Pinchback became governor. A deal was offered by white politicians that if Pinchback withdrew as governor "*gracefully,"* he would be appointed to a six-year term in the U.S. Senate. The arrangement was never honored, and instead, Pinchback received the equivalent of his salary for the equivalent period of time.

So, the next time you drive home from work and your engine is well lubricated, your cell phone is working and the drink you picked up along the way is cold, thank these great American pioneers!

Coming in March 2001:
Celebrating Women of Courage and Vision

The theme for National Women's History Month, March 2001 — *Celebrating Women of Courage and Vision* — emphasizes the joy in recognizing women's accomplishments. By honoring women's courage and vision, we set a standard for ourselves and provide a beacon of inspiration for future generations.

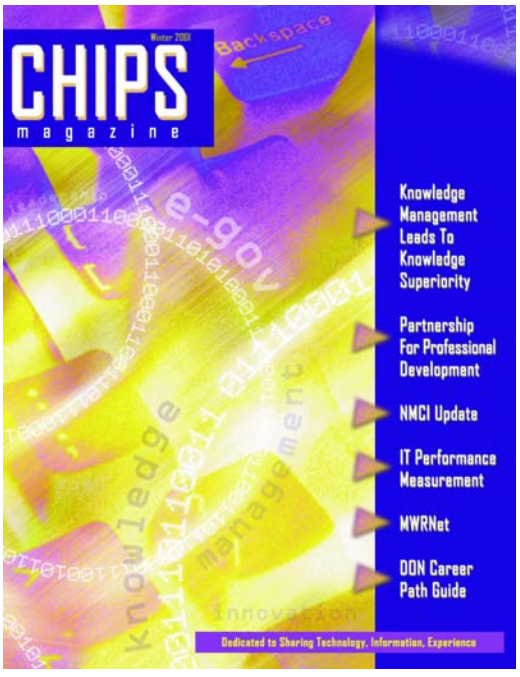
Oops!

Nov/Dec issue Corrections:

Page 4: *SPAWAR gains new echelon-III field activity*: Rear Adm. Rand H. Fischer, Commander, Space and Naval Warfare Systems Command Space Field Activity, was inadvertently pictured with this article. **H. Dale Galloway** is the Director of the Space and Naval Warfare Systems Command Information Technology Center (SPAWAR ITC) in New Orleans, Louisiana.

Page 6: *SSC Charleston participates in Knowledge Management Pilot* – In the last paragraph, Carol Bilbray was inadvertently named as the code 70 representative. **Ric Cosgrove** is code 70's representative on the Knowledge Centric organization (KCO) Pilot Action Team.

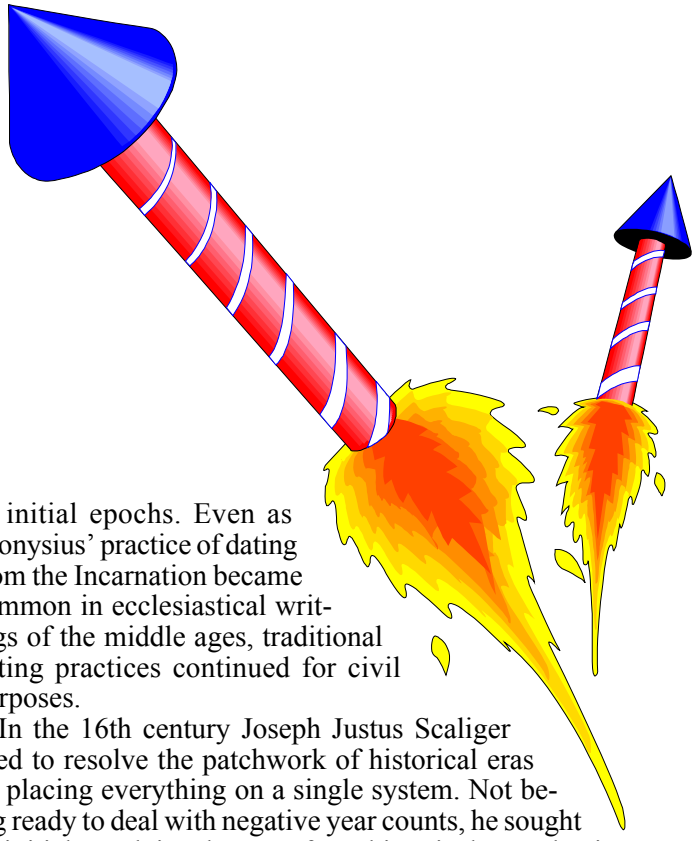
Page 8: Thanks to **Brian Lindgren's** keen eye, we won't be using this *calender* (sic) graphic again. Brian is a technical writer in J523 who spotted the misspelled graphic.



Be a *CHIPS* Subscriber

CHIPS is sponsored by the Department of the Navy Chief Information Office (DoN CIO) and the DoN IT Umbrella Program Office, Space and Naval Warfare Systems Command, San Diego, Calif. *CHIPS* is published quarterly by the Space and Naval Warfare Systems Center, Charleston. You can subscribe to CHIPS online at http://www.chips.navy.mil, by e-mail to chips@spawar.navy.mil, or by sending your request to Editor, *CHIPS*, SSC Charleston, Norfolk Office, PO Box 1376, Norfolk, VA 23501-1376.

Welcome to the 21st Century and the 3rd Millennium



Years of the Gregorian calendar, which is currently in use today, are counted from AD 1. Thus, the 1st century comprised the years AD 1 through AD 100. The second century began with AD 101 and continued through AD 200. By extrapolation, we find that the 20th century comprises the years AD 1901-2000. Therefore, the 21st century began 1 January 2001 and continues through 31 December 2100.

Similarly, the 1st millennium comprised the years AD 1-1000. The 2nd millennium comprises the years AD 1001-2000. The 3rd millennium began with AD 2001 and continues through AD 3000.

Many initial epochs have been used for calendrical reckoning. Frequently, years were counted from the ascension of a ruler. For a calendrical epoch to be useful, however, it must be tied to a sequence of recorded historical events. This is illustrated by the adoption of the birth of Christ as the initial epoch of the Julian and Gregorian calendars. This epoch was established by the 6th century scholar Dionysius Exiguus who was compiling a table of dates of Easter. Dionysius followed previous precedent by extending an existing table (by Cyrillus) covering the period 228-247, reckoned from the beginning of the reign of Emperor Diocletian. However, he did not want his Easter table "to perpetuate the memory of an impious persecutor of the Church, but preferred to count and denote the years from the Incarnation of our Lord Jesus Christ." To accomplish this he designated the years of his table Anni Domini Nostri Jesu Christi 532-550. Thus, Dionysius' Anno Domini 532 is equivalent to Anno Diocletiani 248, so that a correspondence was established between the new Christian Era and an existing system associated with historical records. What Dionysius did not do is establish an accurate date for the birth of Christ. While scholars generally believe that Christ was born a few years before AD 1, the records are too sketchy to allow a definitive dating.

Given an initial epoch, one must consider how to record preceding dates. Today it is obvious that a year designated 1 would be preceded by year 0, which would be preceded by year -1, etc. But since the concept of negative numbers did not come into use in Europe until the 16th century, and was initially only of interest to mathematicians, its application to chronological problems was delayed for two more centuries. Instead, years were counted from a succession of initial epochs. Even as Dionysius' practice of dating from the Incarnation became common in ecclesiastical writings of the middle ages, traditional dating practices continued for civil purposes.

In the 16th century Joseph Justus Scaliger tried to resolve the patchwork of historical eras by placing everything on a single system. Not being ready to deal with negative year counts, he sought an initial epoch in advance of any historical record. His approach was numerological and utilized three calendrical cycles: the 28-year solar cycle, the 19-year cycle of Golden Numbers, and the 15-year indiction cycle. The solar cycle is the period after which week days and calendar dates repeat in the Julian calendar. The cycle of Golden Numbers is the period after which moon phases repeat (approximately) on the same calendar dates. The indiction cycle was a Roman tax cycle of unknown origin. Therefore, Scaliger could characterize a year by the combination of numbers (S,G,I), where S runs from 1 through 28, G from 1 through 19, and I from 1 through 15. Scaliger first stated that a given combination would recur after 7980 (= 28 x 19 x 15) years. He called this a Julian cycle because it was based on the Julian calendar. Scaliger knew that the year of Christ's birth (as determined by Dionysius Exiguus) was characterized by the number 9 of the solar cycle, by Golden Number 1, and by number 3 of the indiction cycle, or (9,1,3). Then Scaliger chose as this initial epoch the year characterized by (1,1,1) and determined that (9,1,3) was year 4713 of his chronological era. Scaliger's initial epoch was later to be adopted as the initial epoch for the Julian Day numbers.

We would say that Scaliger's initial epoch was 4713 BC or -4712. In the historical system of dating, AD 1 is preceded by 1 BC; there is no year 0. In the astronomical system, AD 1 is designated +1; this is preceded by year 0, which is preceded by year -1. The historical system was introduced in the 16th century. However, the astronomical system was not introduced until the 18th century.

(Information extracted from the DoN U.S. Naval Observatory web site http://psyche.usno.navy.mil)